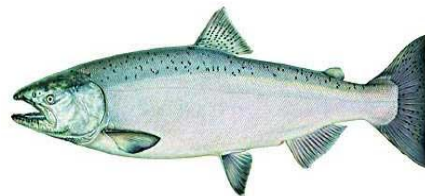




Draft Central Valley Salmon and Steelhead Recovery Plan



Winter-run
Chinook Salmon



Spring-run
Chinook Salmon



Steelhead

National Marine Fisheries Service

Delta Conservancy Briefing

January 17, 2013



NOAA FISHERIES

Recovery Plans vs. Biological Opinions

Recovery Plans

- Section 4 of Endangered Species Act (ESA)
- Road map to species recovery (de-listing)
- Guidance documents, not regulations

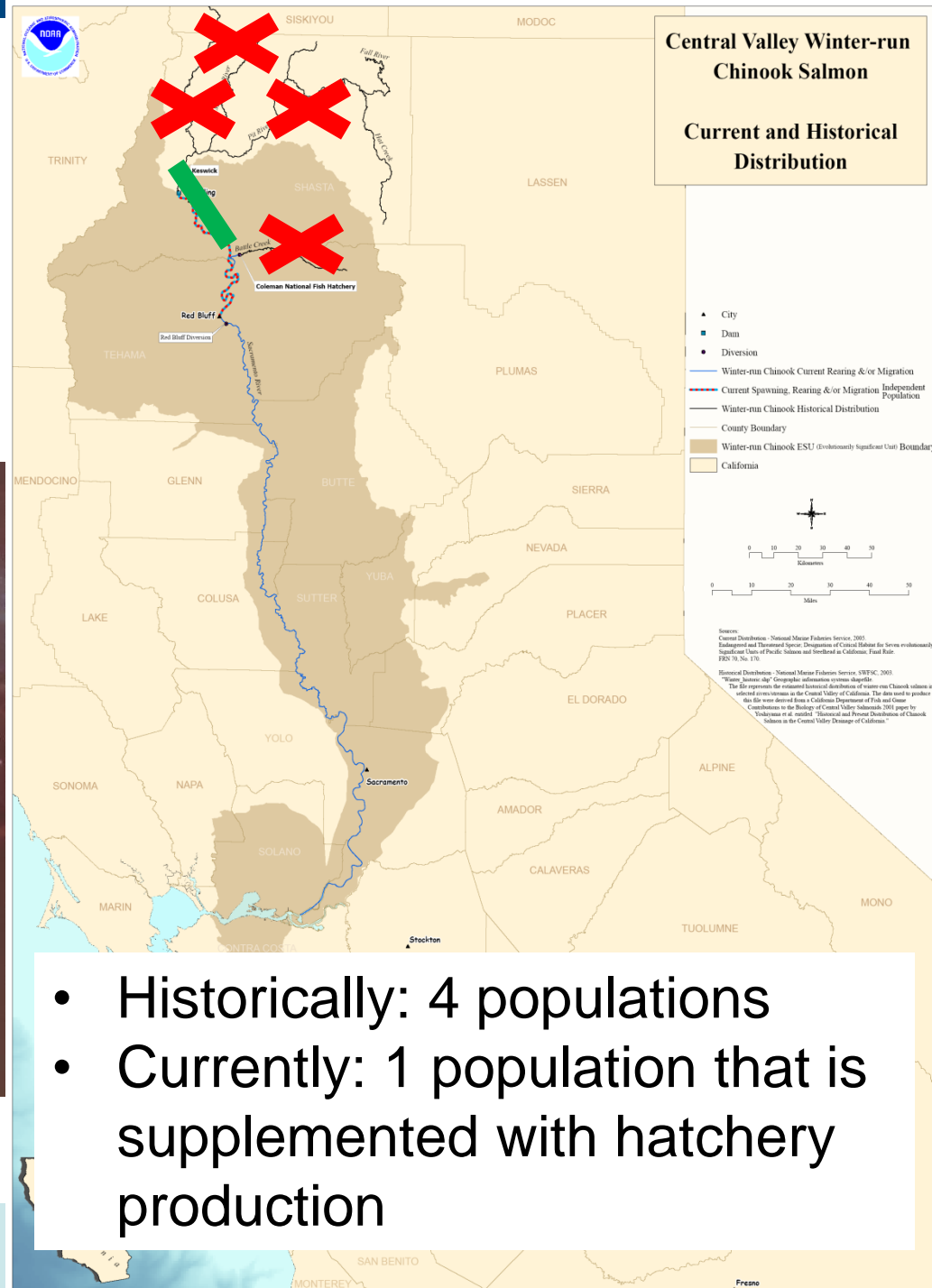
Biological Opinions

- Section 7 of ESA
- Insure that Federal actions do not jeopardize ESA-listed species
- Regulatory

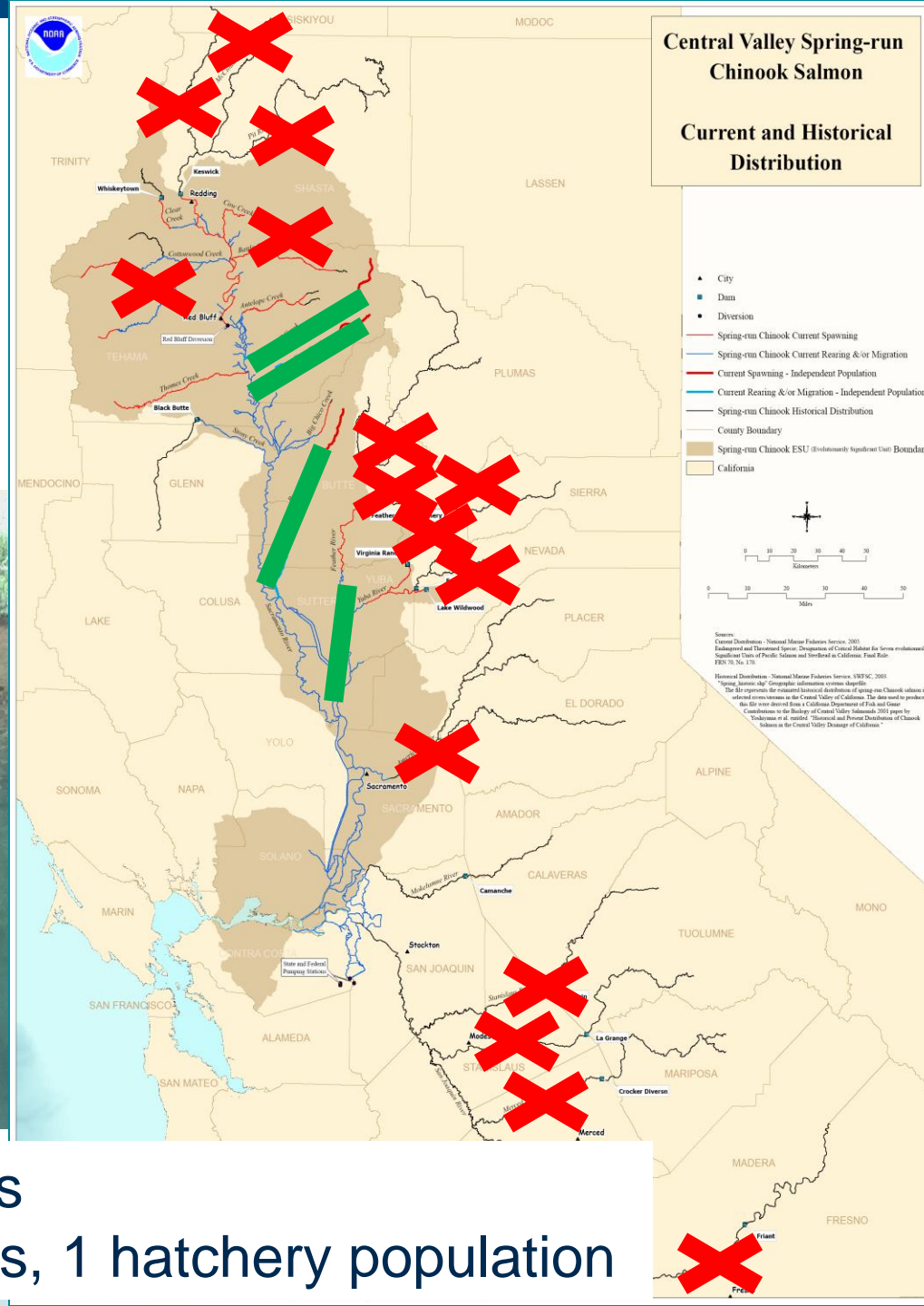
Background of Recovery Plan Development

- 2001: NMFS Technical Recovery Team formed
 - Comprised of State, Federal and Academic experts
 - TRT published several foundational papers
- 2007: NMFS Recovery Team formed
 - Used the TRT products as a foundation for developing recovery goals and criteria
 - Public workshops
- 2008: Center for Independent Expert (CIE) & Co-manager Drafts Issued
 - 3 CIE reviewers
 - Over 1,000 comments received and addressed
- 2009: Public Review Draft Issued
 - Public workshops & 120-day comment period that ended on 2/3/10
- 2010-2013
 - Address public comments; fish agency coordination
 - Issue final recovery plan this spring

Winter-run Chinook salmon (Endangered)

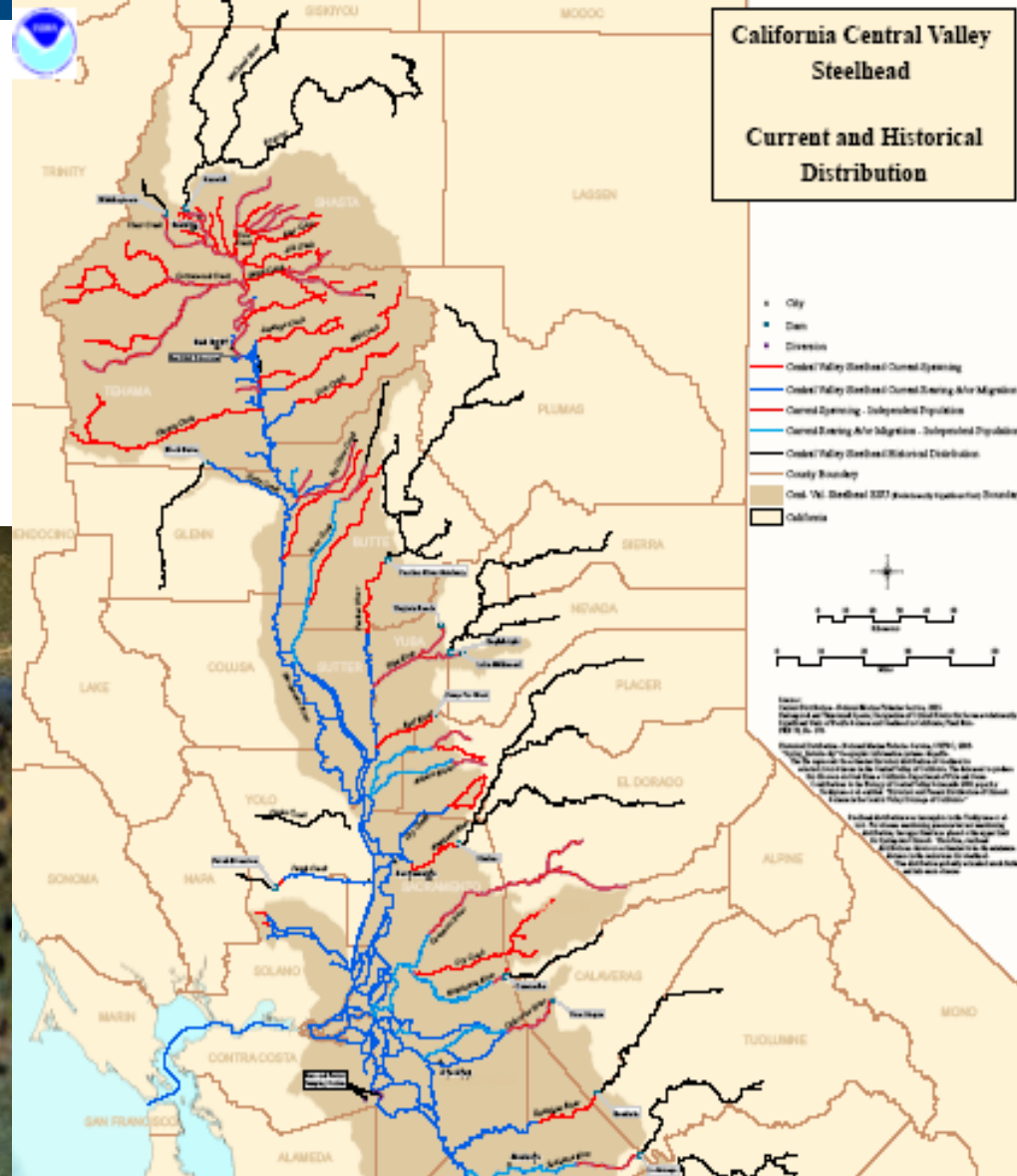


Central Valley Spring-run Chinook salmon (Threatened)



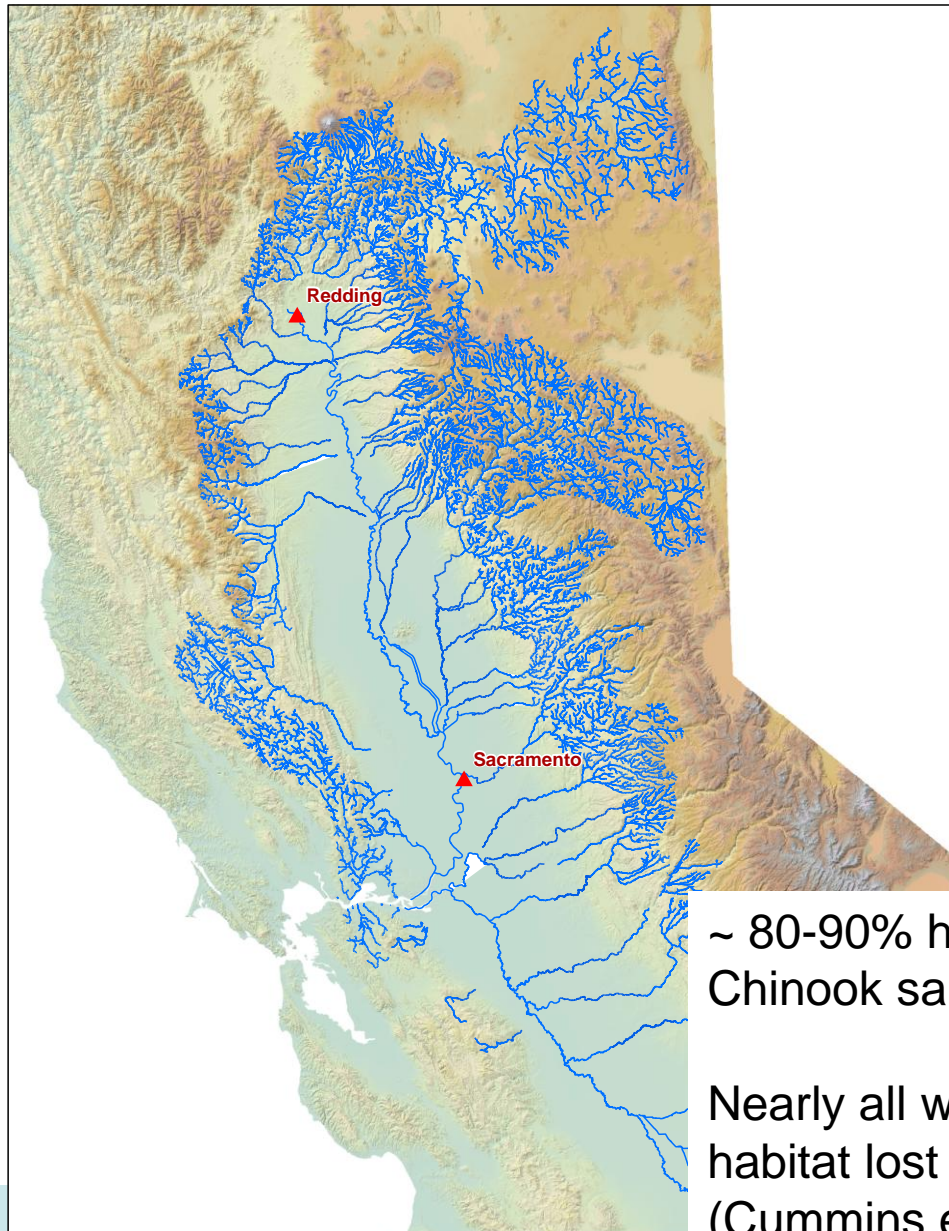
- Historically: ~18 populations
- Currently: 3 wild populations, 1 hatchery population

Central Valley steelhead (Threatened)

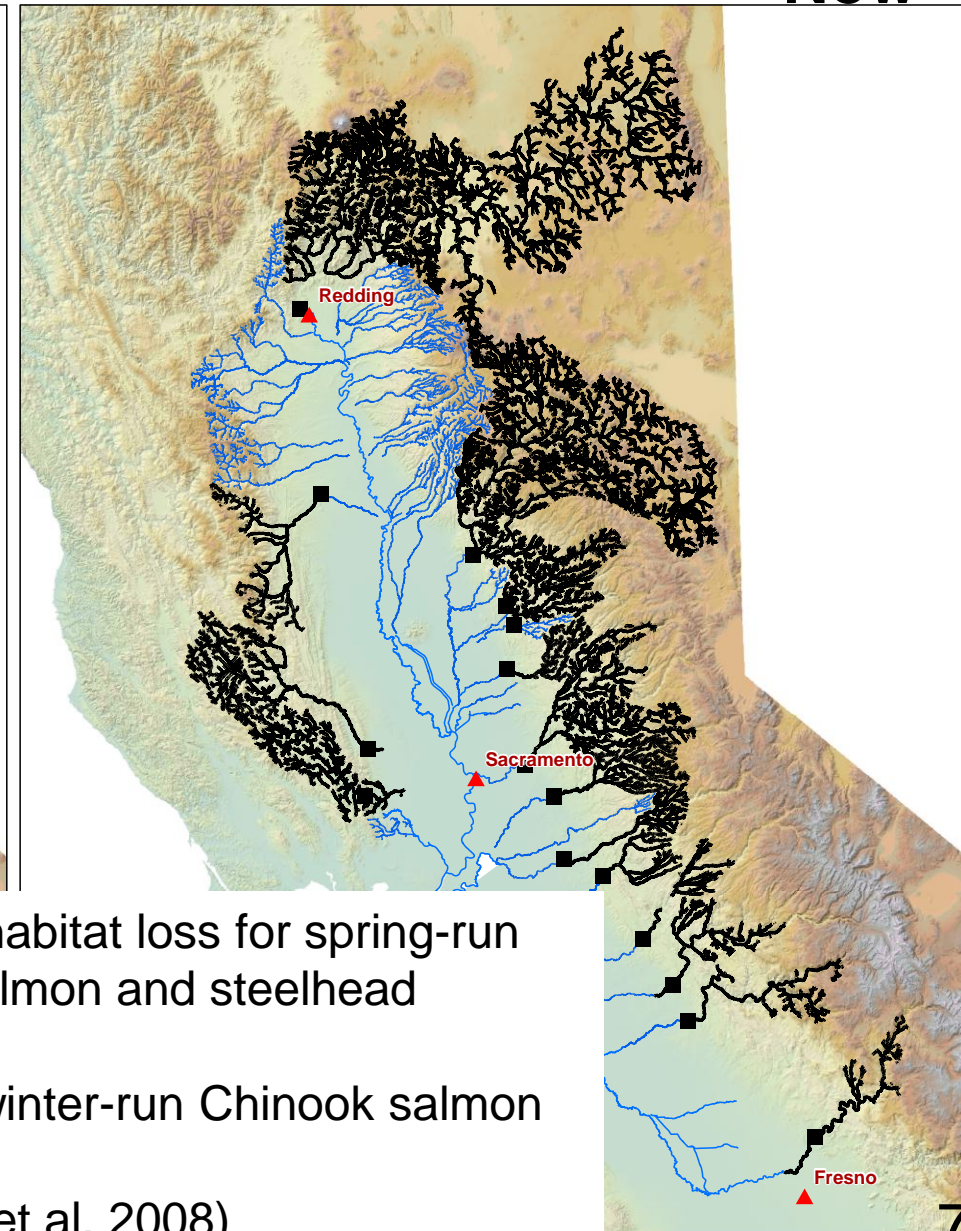


- Historically: ~81 populations
- Currently: Nearly all historic spawning habitat inaccessible

Then



Now



~ 80-90% habitat loss for spring-run Chinook salmon and steelhead

Nearly all winter-run Chinook salmon habitat lost
(Cummins et al. 2008)

Framework for Assessing Viability of Threatened and Endangered Chinook Salmon and Steelhead in the Sacramento-San Joaquin Basin

Steven T. Lindley*, National Oceanic and Atmospheric Administration

Robert S. Schick, National Oceanic and Atmospheric Administration

Ethan Mora, University of California, Santa Cruz

Peter B. Adams, National Oceanic and Atmospheric Administration

James J. Anderson, University of Washington

Sheila Greene, California Department of Water Resources

Charles Hanson, Hanson Environmental, Inc.

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- Cannot lose any more populations
- Habitat must be expanded to restore populations in key watersheds

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spawns outside of its historical spawning range. We are unable to assess the status of the Central Valley

Recovery Strategy

- Secure existing populations (and habitat)
- Reintroduce fish to historic habitats

Recovery Strategy - Setting Priorities

- **Secure Existing Populations**
 - Core 1 Populations: Viable populations
 - Core 2 Populations: Dependent populations
 - Core 3 Populations: Small, ephemeral populations
- **Reintroduce to Historic Habitats**
 - Primary candidate reintroduction areas
 - Secondary candidate reintroduction areas
 - Areas not considered for reintroduction

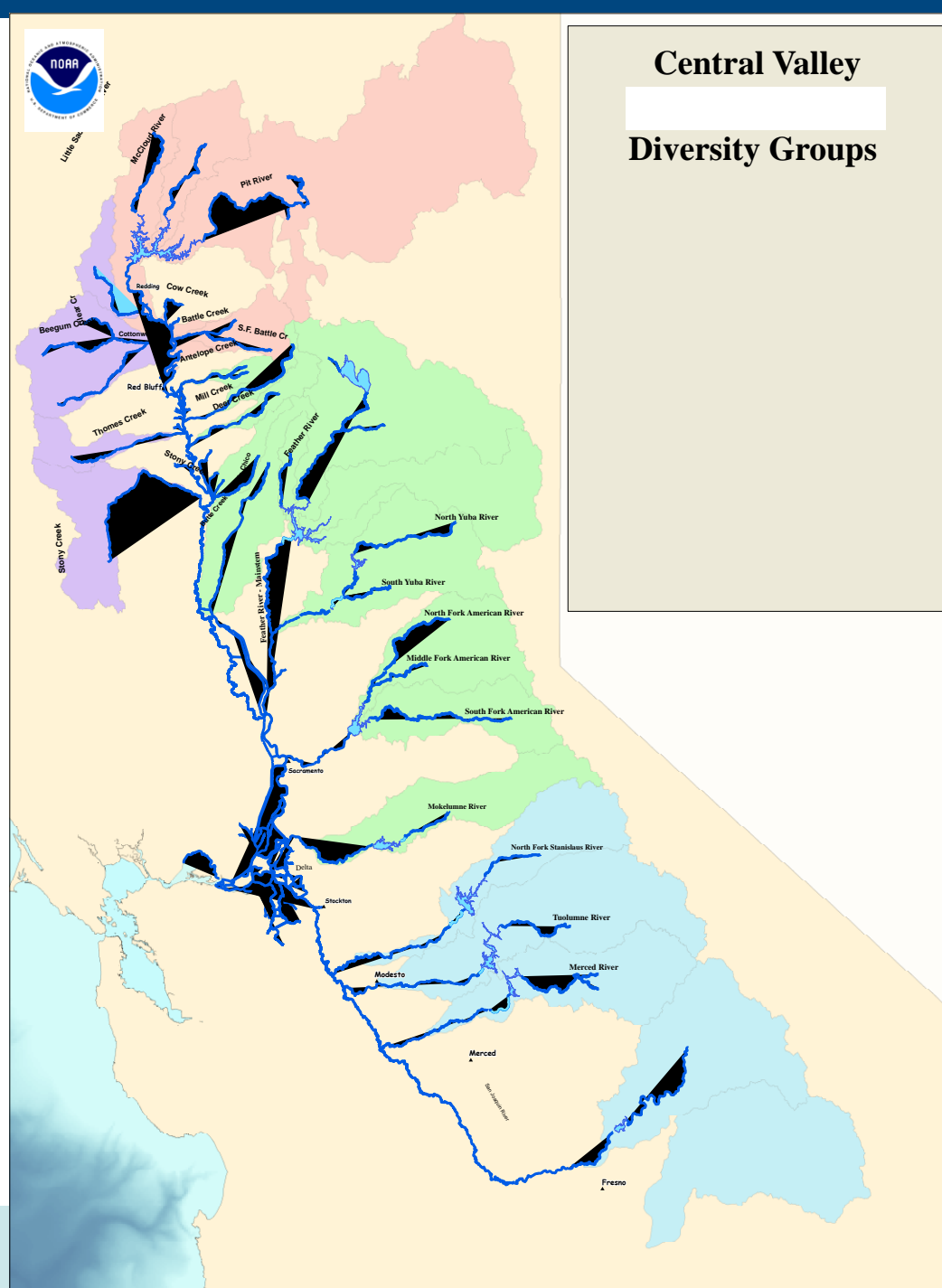
Recovery Strategy

Species level:

- ## - Viable populations spread through the Central Valley

Population level:

- Abundance
- Productivity
- Diversity (hatchery influence)



Winter-run Chinook Salmon Watershed Priorities

Diversity Group	Diversity Group Objective*	Current Core 1 Population	Re-introduction Priorities	Current Core 2 Populations
Basalt and Porous Lava	3	Sacramento River	McCloud River (Target)	None
			Battle Creek (Target)	
*number of populations with low risk of extinction				



Spring-run Chinook Salmon Watershed Priorities

Diversity Group	Diversity Group Objective*	Current Core 1 Populations	Re-introduction Priorities	Current Core 2 Populations
Basalt and Porous Lava	2	Battle Creek	McCloud River (Target)	Sacramento River (below Keswick)
Northwestern California	1	Clear Creek	None	Cottonwood/Beegum
Northern Sierra Nevada	4	Mill Creek Deer Creek Butte Creek	Yuba River above Englebright (Target)	Yuba River (below Englebright)
				Antelope Creek
				Feather River (below Oroville)
Southern Sierra Nevada	2	None	San Joaquin (below Friant) (Target)	None Currently Identified
			One Candidate Watershed	

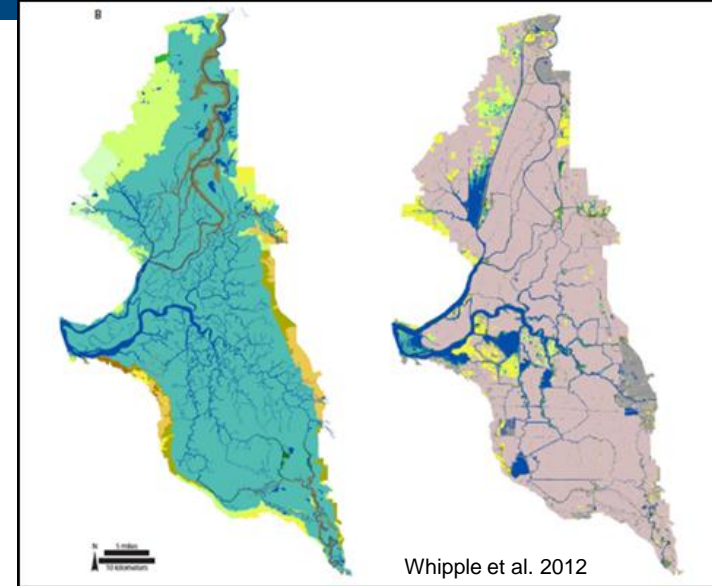


Steelhead Watershed Priorities

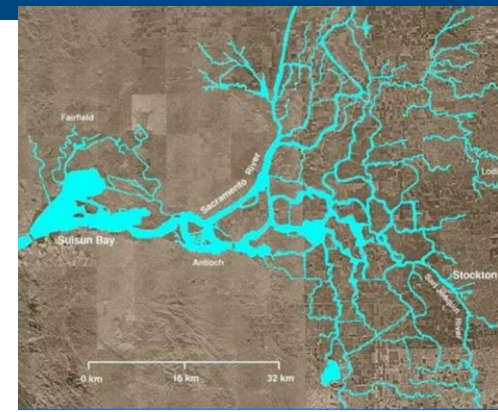
Diversity Group	Diversity Group Objective*	Current Core 1 Populations	Re-introduction Priorities	Current Core 2 Populations
Basalt and Porous Lava	2	Battle Creek	McCloud River (Target)	Cow Creek
				Redding Area Tributaries
				Sacramento River (below Keswick)
Northwestern California	1	Clear Creek	None	Thomes Creek
				Putah Creek
				Cottonwood/Beegum
Northern Sierra Nevada	5	Antelope Creek Deer Creek Mill Creek	Yuba River above Englebright (Target)	Lower Yuba River
			One Candidate Watershed	Butte Creek
				Feather River (lower)
				Big Chico Creek
				Auburn Ravine
				American River
Southern Sierra Nevada	2	Calaveras River	One Candidate Watershed	Stanislaus River (below Goodwin)
				Merced River (below Crocker Huffman)
				Tuolumne River (below La Grange)

Multispecies Recovery Actions

- Delta habitat restoration
- Enhance Yolo bypass
- Reduce non-native fish predation in the lower Sacramento and San Joaquin River and the Delta
- Implement all phases of the Battle Creek Restoration Project
- Implement the San Joaquin Restoration Program
- Reduce the harvest of listed salmon in commercial and recreational ocean fisheries



Recovery Actions – Delta



- Restore ecological flows and habitat function throughout the Delta (and the Sacramento and San Joaquin River systems).
- Provide pulse flows of at least 20,000 cfs measured at Freeport periodically during the winter-run emigration season.
- Implement the Delta actions from the 2009 CVP/SWP biological opinion

NOTE: Currently finalizing other Delta actions; consistency checks with other Delta planning documents.

- Next Steps
 - Finalize Delta and CV-wide recovery actions
 - NMFS Regional and National final review
 - Release Final Recovery Plan this spring
- Website
 - <http://swr.nmfs.noaa.gov/>
- Contact Information
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